

### REMARKS

Applicants' representatives thank the Examiner for the courtesy of an in-person interview conducted on August 27, 2008. The present response addresses substantive points discussed during the interview, as discussed below. Accordingly, the present response is believed to constitute a complete written statement of the reasons presented in the interview as warranting favorable action, as required by 37 C.F.R. §1.133.

All claims, with the exception of claim 123, are now cancelled without prejudice or disclaimer. Applicants reserve the right to pursue claims similar or identical to the claims cancelled herein in one or more applications claiming priority to this application.

#### Rejections under 35 U.S.C. §103(a) in view of Melzner and Brandes

Claims 1, 3, 5, 7-10, 13, 14, 16-18, 20-23, 56-59, 90-104, 107-112, 114-121, 123-130, 132-136, 138, 139, 140, and 150 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Melzner, *et al.*, U.S. Patent No. 5,774,414 ("Melzner") and Brandes, *et al.*, U.S. Patent No. 6,445,006 ("Brandes").

The Applicants' and Examiner's views on the law relating to obviousness appear to differ. From the interview, Applicants interpret the Examiner's position to be that, to overcome the obviousness rejection presented, Applicants must show a teaching away from the combination of Melzner and Brandes, or present evidence that making the combination suggested by the Patent Office would render the modified reference unsuitable for its intending purpose. While the Applicants agree that these routes are effective in overcoming rejections, Applicants believe (a) there is ample suggestion within the references of record that this combination would likely not work, and (b) the Examiner is overlooking an important aspect of obviousness law, namely, that the prior art must provide some reason to make the suggested combination and/or that the claimed invention must be a predicable outcome of the combination.

Moreover, it is believed that, in fact, Melzner and Brandes teach away from each other. Melzner teaches memory cells that each contain a micromechanical diaphragm that is under compressive stress. The bistability of the diaphragm in a concave up or a concave down position is created by compressive stress that is applied where *both* ends of the diaphragm are fastened to an

immobile part of the device. See, e.g., Col. 2, lines 39-46, and Col. 2, line 60-Col. 3, line 8. In contrast, however, Brandes teaches that in nanotube devices that perform any sort of movement-related function, his nanotubes are free to move because they are attached only on *one* end, not both ends. For instance, Brandes suggests that his nanotubes that can move by applying a deflecting force on a nanotube fixed at one end (see, Col. 9, line 4-Col. 10, lines 16, or Figs. 11-13). The nanotubes in Brandes are not under any compressive stress, since one end of the nanotube must be free to move in such devices. This is important as the devices disclosed in Brandes (e.g., a flow sensor, an accelerometer, a ciliated motive driver, and a microelectromechanical relay) would be inoperable if the nanotubes were immobilized on both ends. Thus, Melzner and Brandes necessarily teach away from each other, since Melzner requires that the diaphragm be fixed on *both* ends in order to create compressive strength, while Brandes teaches that the nanotubes in his devices based on nanotube movement can *not* be fixed on both ends since that would prevent the nanotubes from moving and the resulting devices would then be inoperable. A nanowire cannot simultaneously be both immobilized at both ends and free to move at one end.

Thus, for at least these reasons, claim 123 is patentable in view of Melzner and Brandes, and it is respectfully requested that the rejection of claim 123 under 35 U.S.C. §103(a) in view of Melzner and Brandes be withdrawn.

Rejections under 35 U.S.C. §103(a) in view of Johnson and Brandes

Claims 122, 125-131, 137-141, and 145 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Johnson, *et al.*, U.S. Patent No. 6,185,122 (“Johnson”) and Brandes.

As these claims have been cancelled, this rejection is now moot, and withdrawal of the rejection is respectfully requested.

Rejections under 35 U.S.C. §103(a) in view of Johnson, Brandes, and Melzner

Claims 1, 3, 5, 7-10, 13, 14, 16-18, 20-23, 56-59, 90-104, 107-112, 114-121, 123, 124, 132-136, and 150 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Johnson and Brandes as applied to claims 122, 125-131, 137-141, and 145, and further in view of Melzner.

Applicants are somewhat confused as to this grounds of rejection, as claim 123 is not dependent on any of claims 122, 125-131, 137-141, or 145, as the Patent Office appears to suggest (indeed, none of claims 1, 3, 5, 7-10, 13, 14, 16-18, 20-23, 56-59, 90-104, 107-112, 114-121, 123, 124, 132-136, and 150 is dependent on any of claims 122, 125-131, 137-141, or 145). Accordingly, clarification is respectfully requested. To the extent that this rejection was intended to be a rejection of Melzner and Brandes, taken further in view of Johnson, Applicants repeat and incorporate by reference their comments with respect to Melzner and Brandes alone, as discussed above, and note that Johnson does not appear to cure the deficiencies of the proposed combination of Melzner and Brandes.

#### Provisional Obviousness-Type Double Patenting

Claims 1, 5, 7, 56, 90, 91, and 96-68 have been provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 90-96 of co-pending U.S. Patent Application Serial No. 11/284,350.

As each of these claims have been cancelled, this rejection is now moot. Withdraw of the rejection is respectfully requested.

#### CONCLUSION

In view of the foregoing remarks, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this response, that the application is not in condition for allowance, the Examiner is requested to call the undersigned at the telephone number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicants hereby request any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Dated: October 24, 2008

Respectfully submitted,

By Tani Chen  
Tani Chen, Sc.D.  
Registration No.: 52,728  
Timothy J. Oyer, Ph.D.  
Registration No.: 36,628  
WOLF, GREENFIELD & SACKS, P.C.  
Federal Reserve Plaza  
600 Atlantic Avenue  
Boston, Massachusetts 02210-2206  
(617) 646-8000